Reference sheet for `natbib` usage

(Describing version 8.31b from 2010/09/13)

For a more detailed description of the `natbib` package, LaTeX the source file `natbib.dtx`.

Overview

The `natbib` package is a reimplementation of the LaTeX `\cite` command, to work with both author–year and numerical citations. It is compatible with the standard bibliographic style files, such as `plain.bst`, as well as with those for `harvard`, `apalike`, `chicago`, `astron`, `authordate`, and of course `natbib`.

Loading

Load with `\usepackage[`*options*`]{natbib}`. See list of *options* at the end.

Replacement bibliography styles

I provide three new `.bst` files to replace the standard LaTeX numerical ones:

`plainnat.bst`   `abbrvnat.bst`   `unsrtnat.bst`

Basic commands

The `natbib` package has two basic citation commands, `\citet` and `\citep` for *textual* and *parenthetical* citations, respectively. There also exist the starred versions `\citet*` and `\citep*` that print the full author list, and not just the abbreviated one. All of these may take one or two optional arguments to add some text before and after the citation.

`\citet{jon90}`	⇒	Jones et al. (1990)
`\citet[chap.~2]{jon90}`	⇒	Jones et al. (1990, chap. 2)
`\citep{jon90}`	⇒	(Jones et al., 1990)
`\citep[chap.~2]{jon90}`	⇒	(Jones et al., 1990, chap. 2)
`\citep[see][]{jon90}`	⇒	(see Jones et al., 1990)
`\citep[see][chap.~2]{jon90}`	⇒	(see Jones et al., 1990, chap. 2)
`\citet*{jon90}`	⇒	Jones, Baker, and Williams (1990)
`\citep*{jon90}`	⇒	(Jones, Baker, and Williams, 1990)

Multiple citations

Multiple citations may be made by including more than one citation key in the `\cite` command argument.

`\citet{jon90,jam91}`	⇒	Jones et al. (1990); James et al. (1991)
`\citep{jon90,jam91}`	⇒	(Jones et al., 1990; James et al. 1991)
`\citep{jon90,jon91}`	⇒	(Jones et al., 1990, 1991)
`\citep{jon90a,jon90b}`	⇒	(Jones et al., 1990a,b)

Numerical mode

These examples are for author–year citation mode. In numerical mode, the results are different.

`\citet{jon90}`	⇒	Jones et al. [21]
`\citet[chap.~2]{jon90}`	⇒	Jones et al. [21, chap. 2]
`\citep{jon90}`	⇒	[21]
`\citep[chap.~2]{jon90}`	⇒	[21, chap. 2]
`\citep[see][]{jon90}`	⇒	[see 21]
`\citep[see][chap.~2]{jon90}`	⇒	[see 21, chap. 2]
`\citep{jon90a,jon90b}`	⇒	[21, 32]

Suppressed parentheses

As an alternative form of citation, `\citealt` is the same as `\citet` but *without parentheses*. Similarly, `\citealp` is `\citep` without parentheses.

The `\citenum` command prints the citation number, without parentheses, even in author–year mode, and without raising it in superscript mode. This is intended to be able to refer to citation numbers without superscripting them.

`\citealt{jon90}`	⇒	Jones et al. 1990
`\citealt*{jon90}`	⇒	Jones, Baker, and Williams 1990
`\citealp{jon90}`	⇒	Jones et al., 1990
`\citealp*{jon90}`	⇒	Jones, Baker, and Williams, 1990
`\citealp{jon90,jam91}`	⇒	Jones et al., 1990; James et al., 1991
`\citealp[pg.~32]{jon90}`	⇒	Jones et al., 1990, pg. 32
`\citenum{jon90}`	⇒	11
`\citetext{priv.\ comm.}`	⇒	(priv. comm.)

The `\citetext` command allows arbitrary text to be placed in the current citation parentheses. This may be used in combination with `\citealp`.

Partial citations

In author–year schemes, it is sometimes desirable to be able to refer to the authors without the year, or vice versa. This is provided with the extra commands

`\citeauthor{jon90}`	⇒	Jones et al.
`\citeauthor*{jon90}`	⇒	Jones, Baker, and Williams
`\citeyear{jon90}`	⇒	1990
`\citeyearpar{jon90}`	⇒	(1990)

Forcing upper cased names

If the first author's name contains a *von* part, such as "della Robbia", then `\citet{dRob98}` produces "della Robbia (1998)", even at the beginning of a sentence. One can force the first letter to be in upper case with the command `\Citet` instead. Other upper case commands also exist.

when	`\citet{dRob98}`	⇒	della Robbia (1998)
then	`\Citet{dRob98}`	⇒	Della Robbia (1998)
	`\Citep{dRob98}`	⇒	(Della Robbia, 1998)
	`\Citealt{dRob98}`	⇒	Della Robbia 1998
	`\Citealp{dRob98}`	⇒	Della Robbia, 1998
	`\Citeauthor{dRob98}`	⇒	Della Robbia

These commands also exist in starred versions for full author names.

Citation aliasing

Sometimes one wants to refer to a reference with a special designation, rather than by the authors, i.e. as Paper I, Paper II. Such aliases can be defined and used, textual and/or parenthetical with:

`\defcitealias{jon90}{Paper~I}`		
`\citetalias{jon90}`	⇒	Paper I
`\citepalias{jon90}`	⇒	(Paper I)

These citation commands function much like `\citet` and `\citep`: they may take multiple keys in the argument, may contain notes, and are marked as hyperlinks.

Selecting citation style and punctuation

Use the command `\setcitestyle` with a list of comma-separated keywords (without spaces) as argument.

- Citation mode: `authoryear` or `numbers` or `super`
- Braces: `round` or `square` or `open={`*char*`},close={`*char*`}`
- Between citations: `semicolon` or `comma` or `citesep={`*char*`}`
- Between author and year: `aysep={`*char*`}`
- Between years with common author: `yysep={`*char*`}`
- Text before post-note: `notesep={`*text*`}`

Defaults are `authoryear`, `round`, `comma`, `aysep={;}`, `yysep={,}`, `notesep={, }`

Example 1, `\setcitestyle{square,aysep={},yysep={;}}` changes the author–year output of

```
\citep{jon90,jon91,jam92}
```

into [Jones et al. 1990; 1991, James et al. 1992].

Example 2, `\setcitestyle{notesep={; },round,aysep={},yysep={;}}` changes the output of

```
\citep[and references therein]{jon90}
```

into (Jones et al. 1990; and references therein).

Other formatting options

Redefine `\bibsection` to the desired sectioning command for introducing the list of references. This is normally `\section*` or `\chapter*`.

Redefine `\bibpreamble` to be any text that is to be printed after the heading but before the actual list of references.

Redefine `\bibfont` to be a font declaration, e.g. `\small` to apply to the list of references.

Redefine `\citenumfont` to be a font declaration or command like `\itshape` or `\textit`.

Redefine `\bibnumfmt` as a command with an argument to format the numbers in the list of references. The default definition is `[#1]`.

The indentation after the first line of each reference is given by `\bibhang`; change this with the `\setlength` command.

The vertical spacing between references is set by `\bibsep`; change this with the `\setlength` command.

Automatic indexing of citations

If one wishes to have the citations entered in the `.idx` indexing file, it is only necessary to issue `\citeindextrue` at any point in the document. All following `\cite` commands, of all variations, then insert the corresponding entry to that file. With `\citeindexfalse`, these entries will no longer be made.

Use with `chapterbib` package

The `natbib` package is compatible with the `chapterbib` package which makes it possible to have several bibliographies in one document.

The package makes use of the `\include` command, and each `\include`d file has its own bibliography.

The order in which the `chapterbib` and `natbib` packages are loaded is unimportant.

The `chapterbib` package provides an option `sectionbib` that puts the bibliography in a `\section*` instead of `\chapter*`, something that makes sense if there is a bibliography in each chapter. This option will not work when `natbib` is also loaded; instead, add the option to `natbib`.

Every `\include`d file must contain its own `\bibliography` command where the bibliography is to appear. The database files listed as arguments to this command can be different in each file, of course. However, what is not so obvious, is that each file must also contain a `\bibliographystyle` command, with possibly differing arguments.

As of version 8.0, the citation style, including mode (author–year or numerical) may also differ between chapters. The `\setcitestyle` command can be issued at any point in the document, in particular in different chapters.

Sorting and compressing citations

Do not use the `cite` package with `natbib`; rather use one of the options `sort`, `compress`, or `sort&compress`.

These also work with author–year citations, making multiple citations appear in their order in the reference list.

Merged Numerical References

Do not use the `mcite` package with `natbib`; rather use the package option `merge`.

With this option in effect, citation keys within a multiple `\citep` command may contain a leading * that causes them to be merged in the bibliography together with the previous citation as a single entry with a single reference number. For example, `\citep{feynmann,*salam,*epr}` produces a single number, and all three references are listed in the bibliography under one entry with that number.

The `elide` option also activates the merging features, but also sees to it that common parts of the merged references (e.g., authors) are not repeated but are written only once in the single bibliography entry.

The `mcite` option turns off the merging and eliding features, but allows the special syntax (the * and optional inserted texts) to be ignored.

These functions are available only to numerical-mode citations, and only when used parenthetically, similar to the restrictions on `sort` and `compress`.

They also require special `.bst` files, as provided for example by the American Physical Society for their REVTEX class.

Long author list on first citation

Use option `longnamesfirst` to have first citation automatically give the full list of authors.

Suppress this for certain citations with `\shortcites{`*key-list*`}`, given before the first citation.

Local configuration

Any local recoding or definitions can be put in `natbib.cfg` which is read in after the main package file.

Options that can be added to `\usepackage`

`round` (default) for round parentheses;

`square` for square brackets;

`curly` for curly braces;

`angle` for angle brackets;

`semicolon` (default) to separate multiple citations with semi-colons;

`colon` the same as `semicolon`, an earlier mistake in terminology;

`comma` to use commas as separators;

`authoryear` (default) for author–year citations;

`numbers` for numerical citations;

`super` for superscripted numerical citations, as in *Nature*;

`sort` orders multiple citations into the sequence in which they appear in the list of references;

`sort&compress` as `sort` but in addition multiple numerical citations are compressed if possible (as 3–6, 15);

`compress` to compress without sorting, so compression only occurs when the given citations would produce an ascending sequence of numbers;

`longnamesfirst` makes the first citation of any reference the equivalent of the starred variant (full author list) and subsequent citations normal (abbreviated list);

`sectionbib` redefines `\thebibliography` to issue `\section*` instead of `\chapter*`; valid only for classes with a `\chapter` command; to be used with the `chapterbib` package;

`nonamebreak` keeps all the authors' names in a citation on one line; causes overfull hboxes but helps with some `hyperref` problems;

`merge` to allow the * prefix to the citation key, and to merge such a citation's reference with that of the previous citation;

`elide` to elide common elements of merged references, like the authors or year;

`mcite` to recognize (and ignore) the merging syntax.